

GREAT DIVIDE ENERGY PARK LLC

December 10, 2021

Electronically Filed

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Subject: Preliminary Permit Application for the Great Divide Pumped Storage
Hydro Project**

Dear Secretary Bose:

Great Divide Energy Park, LLC is submitting a Preliminary Permit Application for the Great Divide Pumped Storage Hydro Project. Please note the enclosed application.

We look forward to successfully licensing this project. If you have any question or need additional information, please do not hesitate to contact me at (406)-585-3006 or carl@absarokaenergy.com.

Respectfully submitted,



Carl E. Borgquist
President and CEO
Great Divide Energy Park LLC
612 E. Main St. Suite D
PO Box 309
Bozeman, MT 59771

VERIFICATION STATEMENT

This application for preliminary permit for the Great Divide Pumped Storage Hydro Project is executed in the:

State of Montana

County of Gallatin

By: Carl E. Borgquist
Great Divide Energy Park, LLC
612 East Main St., Suite D
PO Box 309
Bozeman, MT 59771
406-585-3006

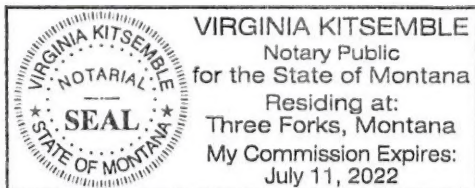
Carl E. Borgquist, being duly sworn, deposes and says that the contents of this application are true to the best of his knowledge or belief. The undersigned applicant has signed the application this 10th day of December, 2021.

Great Divide Energy Park, LLC

By: [Signature]
Carl E. Borgquist
President and CEO

Subscribed and sworn to before me, a Notary Public of the State of Montana on this 10 day of December, 2021.

SEAL



[Signature]
Notary Public for Montana

Printed Name: Virginia Kitsemble

My Commission expires: 7/11/2022

PRELIMINARY PERMIT APPLICATION
GREAT DIVIDE PUMPED STORAGE HYDRO PROJECT
FREMONT COUNTY, WYOMING

GREAT DIVIDE ENERGY PARK, LLC

December 10th, 2021

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Initial Statement**Before the Federal Energy Regulatory Commission
Application for Preliminary Permit**

1) Great Divide Energy Park, LLC (GDEP or Applicant) hereby applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed Great Divide Closed Loop Pumped Storage Hydro Project (Project), as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

2) The location of the proposed project is:

State or Territory:	Wyoming
County:	Fremont
Township or nearby town:	Jeffery City
Stream or other body of water:	Sheep Mountain Uranium Mine Tailing Ponds

3) The exact name, business address, and telephone number of the applicant are:

**Great Divide Energy Park, LLC
c/o Carl Borgquist
612 East Main St., Suite C
PO Box 309
Bozeman MT, 59771
406-585-3006**

The exact name and business address of each person authorized to act as agent for the applicant in the application are:

**McMillen Jacobs Associates
Michael Manwaring P.G.
1011 Western Ave., Suite 706
Seattle, WA 98104
206-743-9252**

**Hydro Regulatory Services LLC
Steve Padula
500 Broadway St., Suite 606
Vancouver WA, 98660
360-607-0770**

4) *Great Divide Energy Park, LLC is a limited liability company in the business of generating, developing, and selling electrical power and providing ancillary services to support the transmission grid. GDEP is not claiming preference under section 7(a) of the Federal Power Act.*

5) *The Proposed term of the requested permit is:*

48 months

6) *If there are any existing dam or other project facility, the applicant must provide the name and address of the owner of the dam and facility. If the dam is federally owned or operated, provide the name of the agency:*

There are no existing dams or other project facilities at the proposed Project location.

Information Required by 18 CFR4.32 (a):

1) *Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:*

Great Divide Energy Park, LLC
c/o Carl Borgquist
612 East Main St., Suite C
PO Box 309
Bozeman MT, 59771
406-585-3006

2) *For a preliminary permit or a license, identify:*

i. *Every County in which any part of the project, and any federal facilities that would be used by the project, would be located:*

Fremont County
450 N. 2nd St., Room 220
Lander WY, 82520

ii. *Every city, town, or similar local political subdivision:*

(A) *In which any part of the project, and any federal facilities that would be used by the project, would be located:*

The Project is not located within any political subdivision.

(B) That has a population of 5,000 or more people and is located within 15 miles of the project dam:

The project is not located within 15 miles of a political subdivision with a population of 5,000 or more people.

iii. Every irrigation district, drainage district, or similar special purpose political subdivision:

(A) In which any part of the project, and any federal facilities that would be used by the project, would be located:

Midvale Irrigation District
PO Box 128
Pavilion WY, 82523
307-856-6359

Popo Agie Conservation District
221 S. 2nd St.
Lander WY, 82520
307-332-3114

Wyoming Department of Transportation District 5
PO Box 929
Lander WY, 82520
307-332-4151

Wyoming State Engineers Office
122 W. 25th St.
Cheyenne WY, 82002
307-777-7641

There are no federal facilities that would be used by the Project.

(B) That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project:

No such political subdivisions own, maintain, or use any Project facilities.

iv. Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application:

Lander Bureau of Land Management Field Office
1335 Main St.
Lander WY, 82520
307-332-8400
<https://www.blm.gov/office/lander-field-office>

Southern Plains Region Regional Office of Indian Affairs
PO Box 368
Anadarko OK, 73005
405-247-6673
<https://www.bia.gov/regional-offices/southern-plains>

Wyoming Department of Environmental Quality
200 West 17th St.
Cheyenne WY, 82002
307-777-7937
<http://deq.wyoming.gov>

Wyoming Department of Environmental Quality Council
510 Meadow View Dr.
Lander WY, 82520
307-332-3047
<http://deq.wyoming.gov>

Lander Region of the Wyoming Game and Fish Dept
260 Buena Vista Dr.
Lander WY, 82520
307-332-2688
<https://wgfd.wyo.gov/Regional-Offices/Lander-Region>

Wyoming State Parks and Cultural Resources
Barrett Building, 2301 Central Ave.
Cheyenne WY, 82002
307-777-7496
<https://wyospcr.wyo.gov>

Wyoming State Historical Society
614 9th St.
Wheatland WY, 82201
307-322-3014
<https://wyshs.org/contact>

Wyoming Public Service Commission
2515 Warren Ave. Suite 300
Cheyenne WY, 82002
307-777-7427
<https://psc.wyo.gov>

Wyoming Water Development Commission
6920 Yellowtail Rd.
Cheyenne WY, 82002
307-777-7626
<https://wwdc.state.wy.us>

Office of the Wyoming Governor Mark Gordon
200 West 24th St.
Cheyenne WY, 82002
307-777-7434
<https://governor.wyo.gov/contact>

Fremont County Commissioners
450 North 2nd St.
Lander WY, 82520
307-332-1130
<https://www.fremontcountywy.org/>

Fremont Count Weed and Pest, Fremont County Court House
450 N 2nd St. #325
Lander WY, 82520
307-332-1052
<http://www.fcwp.org>

USDA Department of Natural Resources Conservation
508 N. Broadway Ave.
Riverton WY, 82501
307-856-7524
<https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>

U.S. Reclamation Bureau
705 Pendell Blvd.
Casper WY, 82601
307-261-5671
<https://www.usbr.gov>

U.S. Environmental Protection Agency Region 8

1595 Wynkoop St.

Denver CO, 80202

<https://www.epa.gov/aboutepa/epa-region-8-mountains-and-plains>

U.S. Geological Survey Denver Federal Center

PO Box 25046

Denver CO, 80225

303-236-5900

www.usgs.gov

U.S. Geological Survey

521 Progress Cir. #6

Cheyenne WY, 82007

<https://www.usgs.gov/>

Tom Ostermann

Wyoming State Forestry Division

5500 Bishop Blvd.

Cheyenne WY, 82002

307-777-7587

Don Skaar

Montana Department of Fish, Wildlife & Parks

PO Box 200701

Helena MT, 59620

406-444-2535

State Engineer

Wyoming State Engineer's Office

4th Floor, 122 W. 25th

Cheyenne WY, 82002

307-777-6150

Brian T. Kelly

U.S. Fish & Wildlife Service

5353 Yellowstone Rd., Room 308A

Cheyenne WY, 82009

307-772-2374

Honorable Cynthia Lummis
U.S. Senate
Suite SR-124 Russell Senate Office Bldg.
Washington District of Columbia, 20510
202-224-3424

Honorable John Barrasso
U.S. Senate
307 Dirksen Senate Office Bldg.
Washington District of Columbia, 20510
202-224-6441

Honorable Kim Harjo
Madam Chair
Arapaho Tribe of the Wind River Reservation
PO Box 396
Fort Washakie WY, 82514

Honorable John St. Clair
Chairmen
Shoshone Tribe of the Wind River Reservation
PO Box 538
Fort Washakie, WY 82514

Stephen Bredthauer
U.S. Army Corps of Engineers, NW Division
PO Box 2870
Portland OR, 97208
503-808-5150

Bob Dach
U.S. Bureau of Indian Affairs, Natural Resources
911 NE 11th Ave.
Portland OR, 97232
503-231-6702

v. All Indian tribes that may be affected by the Project:

No Indian tribes are anticipated to be affected by the project. Further cultural and archaeological investigation will be ongoing during project development, including consultation with regional tribes.

Exhibit 1 – Project Description:

- 1) *The number, physical composition, dimensions, general configuration, and where applicable, age and condition of any dam, spillways, penstocks, powerhouses, tailraces, or other structures, whether existing or proposed, that would be part of the project:*

The proposed Great Divide Closed Loop Pumped Storage Hydro Project will be a newly constructed facility located on federal Bureau of Land Management (BLM), State of Wyoming, and privately owned land in Fremont County, Wyoming. The Project will consist of an upper and lower off-stream, closed-loop reservoir complex which does not involve any river impoundments. The proposed upper reservoir will be located on a prominent ridge of Green Mountain, and the lower reservoir will be adjacent to the southwest slope of the mountain, with an approximate relief of 1,040 feet between the two reservoirs. The reservoirs will be formed by earthen and/or roller compacted concrete embankments and will be lined with impervious geo-textile or pavement. The upper reservoir will be circular shaped with an approximate linear embankment length of 5,062 feet. The lower reservoir will be an oblong rectangle with an approximate linear embankment length of 5,371 feet. Both the upper and lower reservoir embankments will have a maximum height of approximately 50-75 feet.

The upper and lower reservoirs will be connected by approximately 4,093 linear feet of 18-foot diameter steel penstock. A powerhouse, built substantially below grade, will be located adjacent to the lower reservoir on its north side. It will house three 133 Megawatt (MW) Quaternary turbine/pump unit pairs.

Each Quaternary unit pair will include a pump and a turbine with a dedicated 133 MW motor and 133 MW generator. This configuration allows the facility to simultaneously pump and generate, and to switch modes seamlessly.

The height of the powerhouse is driven by the submergence requirements of the pumps. The facility is expected to reach a maximum depth of 140 feet, though exact specifications will be dependent on the depth and construction of the lower reservoir.

The powerhouse (approximately 200 feet wide by 760 feet long) will consist of a reinforced concrete substructure from the pump foundations up to the generator floor, and a steel framed structure (approximately 40 feet) above the generator floor (ground level).

Existing roads, with necessary improvements, will provide general access to the upper and lower reservoir sites. Direct access to Project features will be provided by new roads built off the existing roads. The new access roads, constructed of gravel, will: (1) connect to either the upper or lower reservoirs from the existing roads; and (2) run along the outside and top of both the upper and lower reservoir embankments.

The proposed water source for the initial fill of the Project will consist of: (1) ground water, (2) the conversion of existing water rights, (3) a new water right, (4) purchase of reclaimed water from the nearby mining pits, transported via a water supply line to the Project reservoir. The exact water acquisition plan for the initial fill and annual makeup water will be identified during further project evaluation.

- 2) *The estimated number, surface area, storage capacity, normal maximum surface elevation (mean sea level) of any reservoirs, whether existing or proposed, that would be part of the project:*

Both the upper and lower reservoirs will have a surface area of approximately 40 acres with a storage capacity of 6,000 acre-feet (ac-ft). The upper reservoir's normal maximum water surface elevation would be around 8,900 ft. The lower reservoir's normal maximum water surface elevation would be around 7,850 ft.

- 3) *The estimated number, voltage, length, interconnection, and where applicable, age and condition, of any primary transmission lines existing or proposed, that would be part of the Project:*

The Project will interconnect to the 230 kiloVolt (kV) transmission line owned by PacifiCorp which is located 2.37 miles southwest of the Project. Easements for a new transmission line connecting the Project will be acquired from the Bureau of Land Management. A substation would also be built to interconnect the Project.

- 4) *The total estimated average annual energy production an installed capacity, the hydraulic head for estimating capacity and energy output, and the estimated number, rated capacity, and where applicable, the age and condition of any of the turbines and generators, whether existing of propose, that would be part of the project works:*

Average Annual Energy:	1,861 Gigawatt Hours (GWhs)
Installed Capacity:	400 MW
Average Gross Hydraulic Head:	1,040 feet
Number of Existing Turbine- Generators:	0
Number of Proposed Turbine-Generators:	3 Pairs
Rated Capacity of Proposed Turbines:	400 MW (133 MW each)

- 5) *All lands of the United States that are enclosed within the proposed project boundary described under paragraph (d)(3)(i) of this section, identified and tabulated on a separate sheet by legal subdivisions of a public land survey of the affected area, if available. If the project boundary includes lands of the United States, such lands must be identified on a completed land description form (FERC Form 587), provided by the Commission. The project location must identify any Federal reservation, Federal tracts, and townships of the public land surveys (or official protractions thereof if unsurvey). A copy of the form*

must also be sent to the Bureau of Land Management state office where the project is located:

See Attachment 1, FERC Form 587.

- 6) *Any other information demonstrating in what manner the proposed project would develop, conserve, and utilize in the public interest the water resources of the region:*

The Project will fulfill the public interest by enhancing the value of energy resources in the region. As a closed loop pumped storage facility, the Project creates flexible capacity and energy storage providing operators with a reliable tool to quickly respond to supply and demand shifts in the regional grid while utilizing a minimal amount of water resources.

Exhibit 2 – Study Plan:

1) *General requirement:*

- (i) *Any studies, investigations, tests, or surveys that are proposed to be carried out, and any that have already taken place, for the purposes of determining the technical, economic, and financial feasibility of the proposed project, taking into consideration its environmental impacts, and of preparing an application for a license of the project:*

The Applicant plans on completing the following additional studies in preparation for applying for a Project license:

- Feasibility: A continuation of the pre-feasibility study to identify construction costs, energy benefits, permitting implications, and marketing of power more accurately.
- Environmental/Cultural: Assessment of potential environmental or cultural impacts/enhancements associated with the construction and operation of the Project.
- Financial: Study of project financial factors, including power development, generation, sale analysis using on and off-peak rates.
- Geologic/Seismic: Research of regional geology/seismology and investigation of local subsurface conditions. LIDAR surveys for consideration in design development and Project construction planning.
- Property: Assessment of surrounding property owners, current land use, easements and utilities, potential right-of-way impacts, construction/operation access, and land use requirements.
- Power Transmission/Distribution: Study of transmission/distribution options.
- Water Supply: Analysis of water supply factors including hydrologic conditions, supply alternatives, water rights, allocation volumes, seepage and evaporation rates, seasonal use requirements.
- Construction Schedule: Assessment of construction needs and factors impacting schedule such as weather conditions, permitting, equipment procurement, and task sequencing.

- Hazard: Reservoir failure analysis/hazard classification.

(ii) The approximate locations and nature of any new roads that would be built for the purpose of conducting the studies:

Adequate access already exists to conduct field studies in the Project area; therefore, no new roads are proposed during this phase.

2) Work plan for new dam construction. For any development within the project that would entail new dam construction, a work plan and schedule containing:

This project does not include new dam construction but will include new water impoundments. A work plan and schedule have been included below as it relates to the construction of the Project.

(i) A description, including the approximate location, of any field study, test, or other activity that may alter or disturb lands or waters in the vicinity of the proposed project, including floodplains and wetlands; measures that would be taken to minimize any such disturbance; and measures that would be taken to restore the altered or disturbed area:

When available, existing information will be utilized during the study phase. To the greatest extent possible, disturbances from access and study/testing activities will be kept to a minimum. Soil/rock borings will be required in the reservoir, penstock, and powerhouse areas for detailed design. Lands disturbed by soil/rock borings will be restored to original conditions. Geologic mapping, geophysical testing, and a seismic evaluation will also be required to further assess sub surface conditions. A site survey and boundary survey will also be conducted in the construction and access areas. Disturbance from subsurface testing and the topographical survey will be minimal and temporary. We will coordinate all site activities with the appropriate agencies.

(ii) A proposed schedule (a chart or graph may be used), the total duration of which does not exceed the proposed term of the permit, showing the intervals at which the studies, investigations, tests, and surveys, identified under this paragraph are proposed to be completed:

Proposed Studies	Yearly Quarter from Receipt of Preliminary Permit															
	Q1 Y1	Q2 Y1	Q3 Y1	Q4 Y1	Q1 Y2	Q2 Y2	Q3 Y2	Q4 Y2	Q1 Y3	Q2 Y3	Q3 Y3	Q4 Y3	Q1 Y4	Q2 Y4	Q3 Y4	Q4 Y4
Financial																
Power																
Property																
Water Supply																
Construction																
Geologic																
Environmental																
Cultural																
Hazard																

3. *Waiver. The Commission may waive the requirements of paragraph (c)(2) pursuant to §385.207 of this chapter, upon a showing by the applicant that the field studies, tests, and other activities to be conducted under the permit would not adversely affect cultural resources or endangered species and would cause only minor alterations or disturbances of lands and waters, and that any land altered or disturbed would be adequately restored.*

The Applicant understands that the Commission has the ability to waive the requirements of paragraph (c)(2) if they so choose.

4. *Statement of Costs and Financing:*

- (i) *The estimated costs of carrying out or preparing the studies, investigations, tests, surveys, maps, plans, or specifications identified under paragraph (c) of this section:*

New studies described in Paragraph 1(i) are anticipated to cost approximately \$1,000,000.

- (ii) *The expected sources and extent of financing available to the applicant to carry out or prepare the studies, investigations, tests, surveys, maps, plans, or specifications identified under paragraph (c) of this section:*

The Applicant will finance all studies.

Exhibit 3 – Proposed Project Maps

Exhibit 3 must include a map or series of maps, to be prepared on United States Geological Survey topographical quadrangle sheets or similar topographical maps of a State agency, if available. The maps must show:

- 1) *The location of the project as a whole with reference to the affected stream or other body of water and, if possible, to a nearby town or any permanent monuments or objects that can be noted on the maps and recognized in the field:*

See Figure 1.

- 2) *The relative locations and physical relationships of the principal project features identified under paragraph (b) of this section:*

See Figure 1.

- 3) *A proposed boundary for the project, enclosing:*

- (i) *All principal project features identified under paragraph (b) of this section, including but not limited to any dam, reservoir, water conveyance facilities, power plant, transmission lines, and other appurtenances.*
- (ii) *Any non-federal lands and any public lands or reservations of the United States necessary for the purposes of the project. To the extent that those public lands or reservations are covered by a public land survey, the project boundary must enclose each of and only the smallest legal subdivisions (quarter-quarter section, lots or other subdivisions, identified on the map by subdivision) that may be occupied in whole or in part by the project.*

The Project occupies in whole or in part the following lands. Lands are labeled to match FERC Form 587, which can be seen in Attachment 1. Maps of Project lands can be seen in Figure 1.

A – T27N R91 S6

B – T27N R92W S1

C – T27N R92W S2

D – T27N R92W S3

E – T27N R92W S4

F – T27N R92W S10

G – T27N R92W S11

H – T27N R92W S12

I – T28N R92W S32

J – T28N R92W S33

K – T28N R92W S36

- 4) *Areas within or in the vicinity of the proposed project boundary which are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers system:*

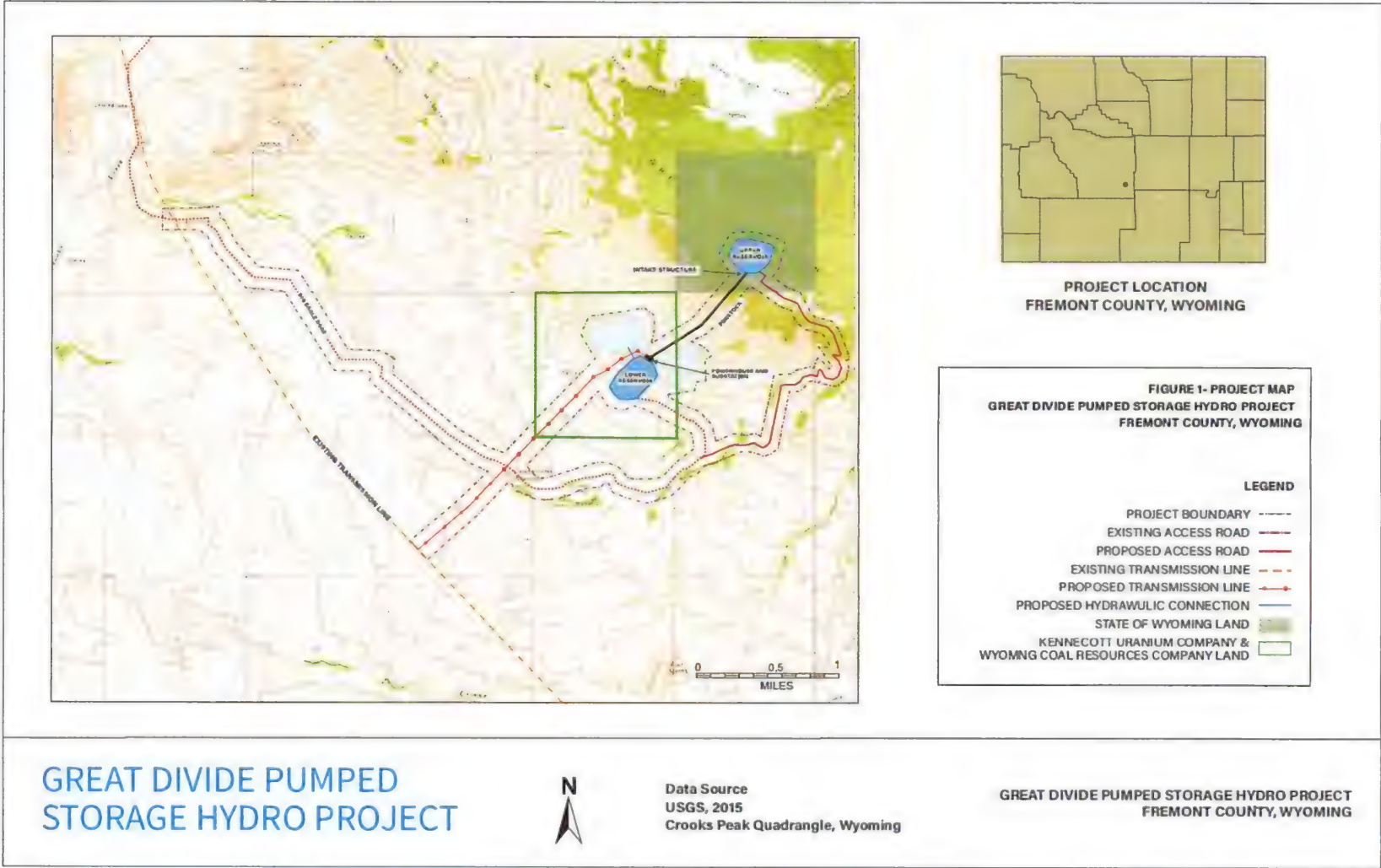
No areas in the Project vicinity are included (or are known to have been designated for study for inclusion) in the National Wild and Scenic Rivers system.

- 5) *Areas within the project boundary that, under the provisions of the Wilderness Act, have been:*

- (i) *Designated as wilderness area;*

- (ii) Recommended for designation a wilderness area; or*
- (iii) Designated as wilderness study area:*

No areas within the Project boundary have been designated as wilderness area, and no areas within the Project boundary are known to be recommended for designation as wilderness area, or designated as wilderness study area.



Attachment 1 – FERC Form 587

Form FERC 587
OMB No. 1902-0145
(Expires 10/31/2021)

**LAND
DESCRIPTION**
Public Land States
(Rectangular Survey System Lands)

1. STATE Wyoming 2. FERC PROJECT NO. _____
3. TOWNSHIP 27 N RANGE 91 W MERIDIAN SIXTH

4. Check one:
☐ License
☒ Preliminary Permit

Check one:
☒ Pending
☐ Issued

If preliminary permit is issued, give expiration date: Four years after issuance date

5. EXHIBIT SHEET NUMBERS OR LETTERS

Section 6	5	4	3	2	1
A					
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

6. contact's name Carl Borgquist
telephone no. 406-585-3006
date submitted December 9th 2021

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Form FERC 587
OMB No. 1902-0145
(Expires 10/31/2021)

**LAND
DESCRIPTION**
Public Land States
(Rectangular Survey System Lands)

1. STATE Wyoming 2. FERC PROJECT NO. _____
3. TOWNSHIP 27 N RANGE 92 W MERIDIAN SIXTH

4. Check one:
☐ License
☒ Preliminary Permit

Check one:
☒ Pending
☐ Issued

If preliminary permit is issued, give expiration date: Four years after issuance date

5. EXHIBIT SHEET NUMBERS OR LETTERS

Section 6	5	4	3	2	1
		E	D	C	B
7	8	9	10	11	12
			F	G	H
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

6. contact's name Carl Borgquist
telephone no. 406-585-3006
date submitted December 9th 2021

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Form FERC 587
OMB No. 1902-0145
(Expires 10/31/2021)

**LAND
DESCRIPTION**
Public Land States
(Rectangular Survey System Lands)

1. STATE Wyoming 2. FERC PROJECT NO. _____
3. TOWNSHIP 28 N RANGE 92 W MERIDIAN SIXTH

7. Check one:
☐ License
☒ Preliminary Permit

Check one:
☒ Pending
☐ Issued

If preliminary permit is issued, give expiration date: Four years after issuance date

8. EXHIBIT SHEET NUMBERS OR LETTERS

Section 6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
	I	J			K

9. contact's name Carl Borgquist
telephone no. 406-585-3006
date submitted December 9th 2021

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Document Content(s)

20211210_GreatDivide_PPA_FERC.pdf1